

CLINICAL IMAGE

Parapelvic cysts mimicking hydronephrosis

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A 52-year-old asymptomatic man was seen in the nephrology clinic for kidney donor evaluation. His serum creatinine was normal. A routine renal sonogram was

Key Clinical Message

Point-of-care renal ultrasonography performed by physicians at bedside assists in rapid evaluation of hydronephrosis, nephrolithiasis and other structural abnormalities, and guides management. As such, it is important to differentiate between various renal pathologies that can mimic one another and herein, we present a case where parapelvic cysts mimicked hydronephrosis.

Keywords

CT scan, cyst, hydronephrosis, ultrasound.

obtained to evaluate for any structural abnormalities, and it was read as hydroureteronephrosis on the left without any obvious source of obstruction (Fig. 1A and B). On

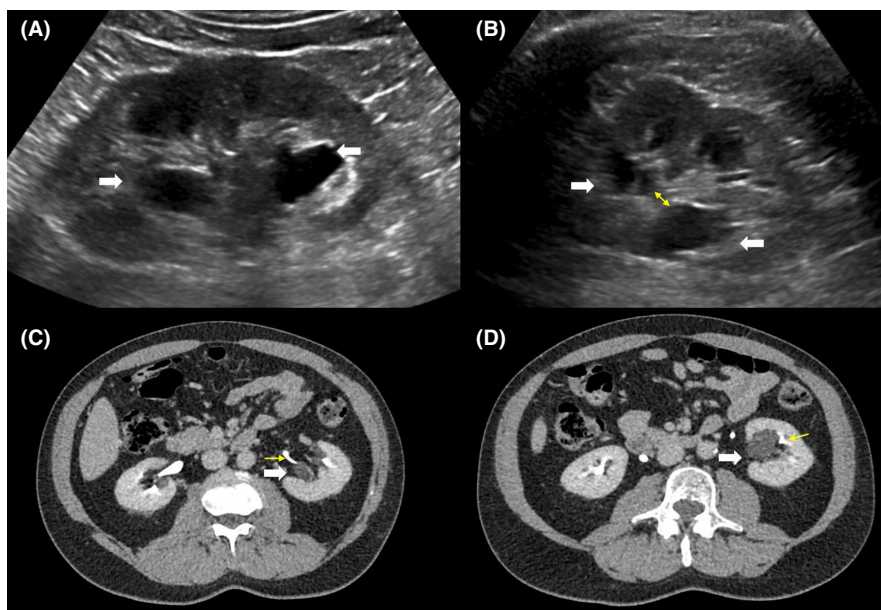


Figure 1. Renal sonogram. (A) Sagittal and (B) transverse views of the left kidney demonstrating hypoechoic areas in the pelvic area (arrows) suggestive of hydronephrosis. However, on the transverse view, these areas do not seem to be connected with one another (double-headed arrow); Computed tomography (CT) scan with contrast (C and D) demonstrating parapelvic cysts (arrows) that are separate from the contrast-filled collecting system (yellow arrows).

further questioning, the patient reported passing a kidney stone about 4 years ago. A computed tomography (CT) scan with contrast was obtained to further evaluate this finding, which demonstrated parapelvic cysts, which were seen distinct from the normal contrast-filled collecting system without any evidence of hydronephrosis (Fig. 1C and D).

Because of their hypoechoic nature and close proximity to the collecting system, parapelvic cysts can mimic hydronephrosis on a renal sonogram. Close attention to detail may sometimes help to differentiate between the two. Hydronephrosis appears as branching, “interconnected” areas of decreased echogenicity that show sonographic evidence of fluid, while parapelvic cysts are seen as “noncommunicating” renal sinus cystic masses [1, 2]. In addition, a dilated pelvicalyceal system has a cauliflower appearance, whereas a parapelvic cyst is more spherical [3]. When the sonogram is not clear enough, a CT scan with contrast should be considered to differentiate between these two conditions.

Authorship

AK: designed and drafted the manuscript. KFA: revised the manuscript for critically important intellectual content

and approved for final submission. Both the authors made substantial contribution to the preparation of this manuscript and approved the final version for submission.

Informed Consent

Informed consent has been obtained for the publication of this clinical image.

Conflict of Interest

The authors have declared that no conflict of interest exists.

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